

CLAIMS

1. Method for generating a base band signal ( $V_p$ ) representative of the transmission power of a radiofrequency signal ( $S$ ) transmitted by a transmitting station, characterized in that it comprises the following steps:

- extract a part ( $S'$ ) of said radiofrequency signal ( $S$ ) transmitted by said transmitting station;
  - mix said part of the radiofrequency signal ( $S'$ ) with itself to generate a voltage signal ( $S''$ ) with at least a DC component;
  - filter said voltage signal ( $S''$ ) so as to keep only the DC component of said voltage signal, and
  - amplify said filtered voltage signal using a logarithmic function,
- to generate said base band signal ( $V_p$ ) representative of the transmission power of said radiofrequency signal transmitted by said transmitting station.

2. Method according to claim 1, characterized in that the voltage signal ( $S''$ ) filtering step and the amplification step using a logarithmic function are carried out by the same logarithmic amplifier (208).

3. Method according to claim 1, characterized in that said filtering step of the voltage signal ( $S''$ ) is carried out by a low pass filter (206) and said amplification step using a logarithmic function is carried out by a logarithmic amplifier (208).

4. Method according to any of claims 1 to 3, characterized in that it is implemented in a transmitting station within a telecommunication system using a CDMA type multiple access technology .

5. Application of the method according to any of claims 1 to 4 for controlling the transmission power of a transmitting station, characterized in that the base band signal generated by said method is supplied to a

feedback loop controlling the transmission power from said transmitting station.

6. Device for generating a base band signal ( $V_p$ ) representative of the transmission power of a radiofrequency signal (S) transmitted by a transmitting station, characterized in that it comprises:
- a passive coupler (200) to extract a part (S') of the radiofrequency signal (S) transmitted by said transmitting station;
  - 10 - a mixer (204) to mix said part (S') of the radiofrequency signal (S) transmitted by the transmitting station with itself to generate a voltage signal (S'') with at least a DC component; and
  - 15 - a logarithmic amplifier (208), to generate, from said voltage signal (S''), said base band signal ( $V_p$ ) representative of the transmission power of the radiofrequency signal (S) transmitted by the transmitting station.

7. Device according to claim 6, characterized in that it further comprises a low pass filter (206) located between said mixer (204) and said logarithmic amplifier (208) to only allow the DC component of the voltage signal (S'') output from the mixer (204) to pass.

8. Transmitting station within a telecommunication system, characterized in that it comprises a device according to claim 6 or 7.

9. Transmitting station according to claim 8, characterized in that it is a base station or a mobile station within said telecommunication system.

10. Telecommunication system comprising at least one transmitting station according to claim 8 or 9, characterized in that it is implemented within at least one telecommunication network belonging to the group comprising:

- GSM telecommunication networks,
- PCS telecommunication networks,
- UMTS telecommunication networks.

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